TM 902 Date: 12/12/08

RESOURCE MANAGEMENT GUIDE

Compartment: 05 Tract: 07 Acreage: 181
Sections: 14 and 15 Township: 3N Range: 3W

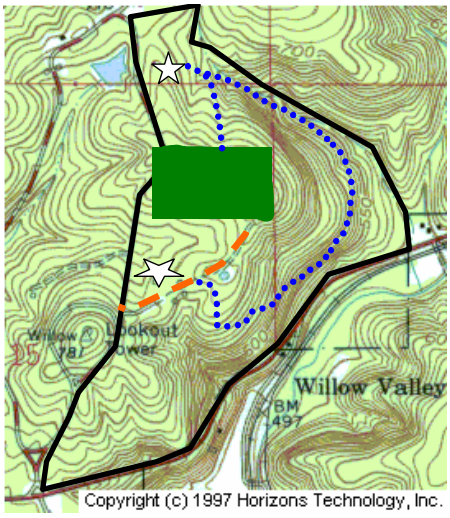
FORESTER'S NARRATIVE

By Andy Fox and Abe Bear

ROADS AND BOUNDARIES:

The Forest Loop Road borders this tract on the entire west edge. A major drainage running to U.S. Highway 50 makes up the northeastern border. U.S. Highway 50 forms the southeastern border as it runs along the tract for about three-quarters of a mile.

Major roads in this tract are the Forest Loop Road on the west side of the tract and U.S. 50 on the south side. Forest Loop Road is a paved county road, which is maintained by the state forest, as well as the Indiana Highway Dept. U.S. 50 is a well-maintained highway cared for by the Indiana Highway Dept. There are two hiking trails and a service road running from the campground to the Tower Hill picnic area. Along with these, fire trail 6 runs south from Williams Road and travels along the northeastern boarder. It gives access for fire and resource management, as well as, hiking and logging.



TRACT DESCRIPTION:

The major sawtimber in this tract is oak-hickory. It comprises over 80 percent of the sawtimber. The major pole class is also oak-hickory at over 50 percent, maple being second with 25 percent. In this oak-hickory dominated tract, there is a great deal of oak die back, with the majority being black oak. The die back was also evident in the white oak, which was not expected due to the life expectancy of white oak. There were also small pockets of blow down throughout the track. Due to the age of the blow downs, it is suspected that they occurred on several separate occasions. There were very few grapevines in this tract. Some evidence of fire was found along the south face of US 50, and also along the loop road.

This tract is in need of a harvest but will be very limited due to recreational usage. The timber that will have low impact on the rec. area will be hard to access due to unwanted visibility from rec. areas.

SOILS: (refer to attached map for specific distributions)

There are several different soil types on this tract, the most abundant of which is Wellston-Berks-Gilpin complex, with 18-70 percent slopes (orange on the map). These well-drained soils are found on most of the side slopes in this tract and are characteristically deep to moderately deep. The surface layer is typically silt or channery silt loam and the subsoil, is roughly 36” deep. Permeability is moderate to moderately rapid, and surface runoff is rapid to very rapid. Organic matter content in the surface layer is moderate to moderately low. Erosion hazards are moderate to severe on these soils, but can be compensated for by using gentle grades for skid trails and by installing water bars and out sloping the roads to remove water.

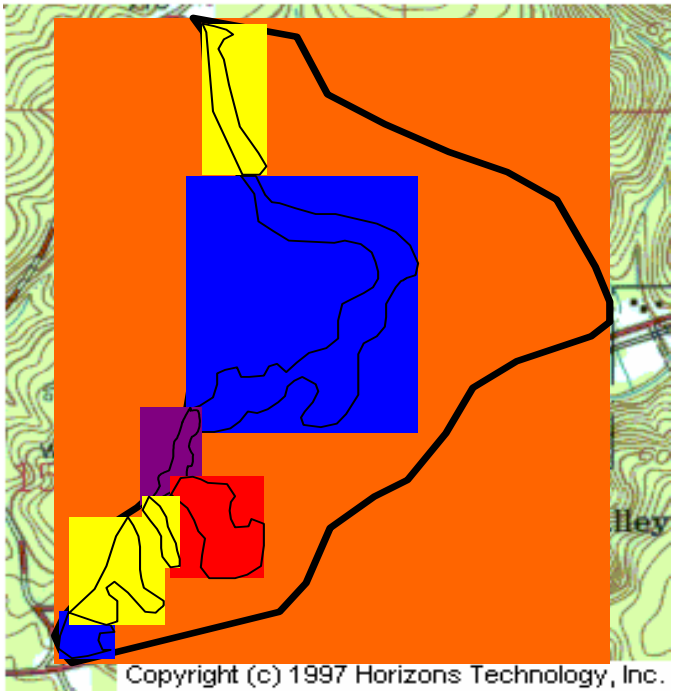
The second most abundant soil type is Zanesville silt loam, with 6 to 12 percent slopes eroded (ZaC2) (yellow on the map). It is a moderately sloping, deep, well to moderately well drained soil found on some ridgetops and upper side slopes. The surface layer is a five-inch thick layer of brown silt loam. The subsoil layer, about 39 inches thick, is a friable silt loam over a silt clay loam. This is underlain by a

silt loam fragipan, which restricts root penetration and downward water movement. This restriction to water movement often results in saturated soil conditions in the winter and spring. Available water capacity is moderate, and permeability is moderate above and slows within the fragipan. Surface runoff is rapid, requiring measures such as water turnouts and bars to properly remove water from roads and yards. The organic matter content is moderate in the surface layer. Erosion hazards and equipment limitations are slight for this soil; however, winter/spring logging may be restricted due to the saturated soil conditions.

The rest of the soil types are fairly equal in proportions. The first of these is WeD2-Wellston silt loam, with 12 to 18 percent slopes eroded (purple on the map). This sloping, deep, well-drained soil is found along drainages on slopes in uplands. The surface layer is dark grayish brown about five inches thick. This layer is also mixed with some brown sub-soil material. The Subsoil is a firm silt clay loam about 5 inches thick. The underlying soil is a yellowish-brown clay-loam with mottled channery and 15% sandstone fragments. This underlying soil runs to about 60 inches in depth. The available water capacity for this soil is high with moderate permeability and very rapid surface run off. There is moderate organic matter content in the soil. Erosion will be a limiting factor when it comes to the logging operations, as this soil is highly erodible.

The second of the remaining soils is Wellston silt loam, with 6 to 12 percent slopes eroded (red on the map). This is a moderately sloping, deep, well-drained soil, found on some ridgetops and side slopes. The surface layer is typically a three to six-inch thick layer of grayish brown silt loam. The subsoil is around 42 inches and is a friable silt loam. Available water capacity is high and permeability is moderate. Surface runoff is rapid, requiring measures such as water turnouts and bars to properly remove water from roads and yards. The organic matter content is moderate in the surface layer. Erosion and equipment use hazards are slight on this soil.

The last soil type is the Zanesville silt loam, with 2 to 6 percent slopes (blue on the map). It is a gently sloping, deep, and well drained to moderately well drained soil found on the ridgetops. The surface layer is an eight-inch thick brown silt loam underlain by roughly three-foot thick silt clay loam subsoil. A firm fragipan, which restricts root penetration, exists in the lower part of the subsoil. In some areas, the lower portion of the subsoil is extremely acidic. Available water capacity is moderate and permeability is moderate above the fragipan and slows within the fragipan. This slow permeability restricts downward water movement through the soil and often results in the soil being saturated in the winter and spring. Surface runoff is medium. Organic matter content in the surface layer is moderate. Erosion hazards and equipment limitations are slight for this soil; however, winter/spring logging may be restricted due to the saturated soil conditions.



Wellston-Berks-Gilpin complex, with 18-70 percent slopes – orange
Zanesville silt loam, with 6 to 12 percent slopes eroded (ZaC2) – yellow
WeD2-Wellston silt loam, with 12 to 18 percent slopes eroded – purple
Wellston silt loam, with 6 to 12 percent slopes eroded – red
Zanesville silt loam, with 2 to 6 percent slopes- blue

HISTORY:

This tract was primarily obtained from three different parties in the Martin county area. The first of which was a group of six widows who sold their land together, 80 acres in all, for $1.00. The second party was Orpheus and Eva Dickey, who sold their land, 27 acres, in May of 1934 for $536.00. Clyde Dickey also sold his land, 40 acres, in May, of 1934 for $1.00.

This tract was inventoried in July of 1980 by forester Janet Eger. She also conducted a timber sale on the tract in 1986. The sale involved 458 trees with a volume of 127,195 Bd. Ft. It sold for $26,786.05 to Tri-State Veneer. A tree planting of 1,175 red oak seedlings was conducted in an opening created during the sale. In 1981, installation of a picnic area and the tree planting were completed.

RECREATION AND WILDLIFE:

This tract is great for both wildlife and recreation. The two picnic shelter houses, campground, and hiking trails; make for some great afternoons of fun and relaxation. The campground has 21 sites and is primitive, with no electrical or water hook-ups. The picnic shelters are available for reservations and make a great area for family reunions, birthday parties, or just a family weekend outing. Also, two lakes in adjacent areas provide for more outdoor recreation as well.

The tract contains two small ponds that provide a year round water source for wildlife. Extensive blow down damage also provides good cover and for wildlife and regeneration. There is a small regeneration area in this tract that provides lots of cover and is a great source of food for animals throughout year. Another source of food is the campgrounds and shelter houses. Although frowned upon, it is fairly certain that visitors feed their food scraps to wildlife.

WATERSHED:

There are two drainages on this tract that make up most of its eastern border. The smaller one starts in the northwestern corner and flows southeast for about a half mile until it meets U.S. 50and joins Beaver Creek, which flows from northeast to southwest in between several ridges in the area. About two-thirds of the water runs south off the tract into this creek. The northern half of the tract drains into the smaller drainage that makes up the northeastern part of the tracts border. There are a couple of smaller drainages along the south face that all flow into the creek bed after a couple hundred of yards. Once in Beaver Creek, water runs down to the East Fork of the White River.

SURROUNDING LANDSCAPE

This tract is part to a much larger forested area. Martin State Forest manages several thousand adjacent acres north, west, and south of this parcel. The Hoosier National Forest manages several large blacks of forest land south and east of the tract. Private land in the vicinity is mostly wooded with scattered agricultural fields. The one exception is the US Gypsum plant just south of the tract.

TM 901 **Date: 7/28/2008**

RESOURCE MANAGEMENT GUIDE
By: Abe Bear

Compartment: 5	**Tract: 7**	**Stand: 2 (recreation areas)**	
County: Martin	**Section: 14,15**	**Township: 3 N**	**Range: 3 W**

Comercial Forest	146	**Average Annual Growth**	
Non-commercial Forest		**Total Basal Area**	89.23
Recreational Use	35	**B.A.-Trees > 14"**	62.31
Permanit Openings		**B.A.-Trees < 14"**	26.92
Other Openings		**Average Site Index**	
Total Acres	181	**Yellow Poplar: 96**	**White Oak: 74**

Species	**Saw Timber Leave**	**Saw Timber Harvest**	**Saw timber Total**
American Beech	0	0	0
Blackgum	0	2,100	2,100
Black Locust	0	0	0
Black Oak	39,600	35,800	75,400
Black Walnut	0	0	0
Chestnut Oak	0	0	0
Pignut Hickory	16,700	18,200	34,900
Pin Oak	0	3,900	3,900
Red Maple	0	0	0
Northern Red Oak	16,500	1,200	17,700
Red Pine	9,600	0	9,600
Scarlet Oak	7,300	0	7,300
Shagbark Hickory	2,100	0	2,100
Sugar Maple	2,000	0	2,000
Sweetgum	4,100	0	4,100
White Ash	4,000	1,800	5,800
White Oak	12,900	17,800	30,700
White Pine	21,200	12,700	33,900
Yellow Poplar	0	0	0
Totals (tract)	120,300	93,500	213,800
Total (per acre)	3,437	2,671	6,109
Percent Oak/Hickory	79%	82%	80%
Percent Beech/Maple	2%	0%	1%
Percent Yellow-poplar	0%	0%	0%

Indiana Division of Forestry
Forest Resource Management
Wildlife Review Checklist – Revised April 2005

Date of Review:	6/02/06		
State Forest:	Martin State Forest		
Inspected By:	Andrew S. Fox & Darren Bridges		
Compartment:	C5	**Township:**	3 North
Tract(s):	T7	**Range:**	3 West
Total Acres:	181	**Section(s):**	10,14, & 15

1. Does the Natural Heritage Database identify any Endangered, Threatened or Rare species or "significant areas" documented from this tract or nearby?

2. Describe the vegetative cover/land use matrix within a 2.5 mile radius of this tract:

   a. A majority of the land within the matrix area is _X_ publicly owned, __ privately owned. (mark one)

   b. Which of the following land cover types are present in the matrix area (mark all that can be easily identified as present from aerial photos, use two marks to identify the most prevalent type)?

      _XX_ Closed-canopy forest
      _X_ Brushy/early successional areas
      _X_ Open fields
      _X_ Open water
      _X_ Developed areas

   C. Does tract contain any habitat/habitat type, which is otherwise missing or poorly represented within the 2.5 mile radius matrix area? Yes/No

   No

   D. Has the land use pattern within the matrix area shown obvious significant change within the last 15 years? Yes/No

   Yes

   If yes, explain:
   Several areas on both private and public land have been harvested within the past 5 yrs, and a couple of tracts on public land that are scheduled to be harvested in the next year or so. There was a regeneration completed on this tract within past ten years.

3. Have there been documented sightings or other evidence of current or recent past (20 years) occurrences of rare, threatened or endangered species within this tract?

   Not to my knowledge.

4. List the expected short term (<5 years) and long term (>5 years) effects the proposed forest resource management activities will have on the following **habitat types within this tract**:

   A. Closed canopy forest

      Short term: The canopy cover can be expected to decrease by about 5% or less in most areas of this tract because of its aesthetic importance. In some areas it could decrease as much as 20%.

      Long term: none, except in regeneration areas where canopy cover will is slowly closing.

   B. Understory woody vegetation

      Short term: An increase in growth rates and density where the canopy is opened up with greater light and moisture penetration.

      Long term: None, except in regeneration openings where it will take longer for the canopy to close.

   C. Herbaceous vegetation

      Short term: An increase in density and growth rates is expected in areas where the canopy is opened and light and water is penetrating through.

      Long term: Same, with diminishing effects as canopy closes.

   D. Streams, Lakes and Ponds

      Short term: None

      Long term: None

   E. Subterranean None

5. List any conditions that would suggest that the management proposal for this tract would require further evaluation by any additional wildlife management specialists?

   None

6. Were any additions, changes or amendments made to the proposed forest resource management activities specifically to enhance or protect wildlife populations or wildlife habitat?

   No

Additional Comments:

Evidence of the following species were either observed or heard during the field review of tract(s):
Squirrels, deer, turkeys, rabbits, raccoons, various birds, frogs, snakes, turtles

Date: 8/7/06 **Compartment: 05** **Tract: 07**

ADDENDUM TO ADDRESS INDIANA BAT MANAGEMENT STRATEGY

(Discuss any adjustments to management activities that are needed to comply with guidelines.)

GUIDELINES--

- *3 live trees per acre 20+ inches DBH and (an additional) 6 live trees per acre 11+ inches DBH (of species with desired characteristics.(i.e. – shagbark, shellbark and bitternut hickory, black, green and white ash, shingle, post, white and northern red oak, slippery and American elm, black locust, eastern cottonwood, silver maple and sassafras).*
- *5 snags per acre 9+ inches DBH and (an additional) 1 snag per acre 19+ inches DBH.*

Snag Trees

The inventory indicated that there were a total of 4.4 snag trees, of the preferred species, per acre greater than 9" DBH; bat management plan guidelines call for five trees per acre. The inventory also showed that there is only .4 trees per acre of a DBH at 19" or greater of the preferred species; the guidelines call for one per acre.

In order to comply with the bat management plan 1 sang tree greater than 9" will be created per every two acres, and in addition one snag tree 19" or greater per acre, will be created. These trees will be marked and deadened as part of the post harvest TSI operation.

Live Trees

The bat management guidelines call for at least three live trees of preferred species per acre greater than twenty inches DBH and an additional six live trees per acre greater than eleven inches DBH. The inventory indicated that there are 12.9 trees of preferred species greater than 11" DBH per acre and 3.6 trees per acre greater than 20" DBH in the leave category. This means that this tract is in compliance with the bat management policy for live trees.

TM 903 Date: 12/12/08

SILVICULTURAL PRESCRIPTION

By: Abe Bear

This tract is in need of a timber harvest due to the large amount of oak die-back and poor quality timber. However, given the scenic value and day use recreational activities, a large scale harvest is not recommended. Instead, a very selective cut in the high use areas, consisting of the poorest quality timber trees, or trees that are within a year or two of dying, be taken. In areas that are not as frequently used, a larger timber harvest of approximately 3,500 bd. ft. per acre may be implemented. This harvesting area will be further limited by the steep slopes on the east side of the tract. A harvest in this location may be utilized as a demonstration/educational site. Informational signs and/or programs could inform visitors of the benefits of timber harvesting. Any harvesting will be followed by a post harvest timber stand improvement operation. Due to the recreation value and limited harvestable area, the sale of timber on this tract is not as high of a priority as those tracts with similar stocking.

A timber stand improvement operation may be a better option for the high use areas. This would allow the better trees to grow freely, while still maintaining the current stand structure and recreational value.

To submit a comment on this document, click on the following link:
http://www.in.gov/surveytool/public/survey.php?name=dnr_forestry

You **must** indicate "Martin C5 T7" in the "Subject or file reference" line to ensure that your comment receives appropriate consideration. Comments received within 30 days of posting will be considered.